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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,801	08/04/2003	William A. Hetrick	03-0661	7188

24319 7590 09/30/2005

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EXAMINER

ELLIS, KEVIN L

ART UNIT PAPER NUMBER

2188

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/633,801

Applicant(s)

HETRICK ET AL.

Examiner

Kevin L. Ellis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**Detailed Action**

1. Claims 1-19 are presented for examination.

***Claim Rejections – 35 USC § 103***

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shirasawa et al., U.S. Patent Application No. 2002/0166027.

A) As to claims 1, 9, and 12, Shirasawa et al. discloses the invention substantially as claimed. There is a method of modifying firmware in a first disk drive of a disk array system comprising copying data from the first disk to a second disk (see Fig 3 Ref 110, ¶ 14 and 38), redirecting requests to access the first disk to the second disk in response to copying the data (see Fig 3 Ref 115, 120, ¶ 15, 38, and 39), and changing firmware presently within the first disk in response to redirecting the requests (see Fig 3 Ref 130 and ¶ 17 and 39). However, Shirasawa et al. does not specifically disclose that this operation is for a RAID storage system, but instead for a disk array storage system. The other embodiments of Shirasawa et al. are disclosed as being useful for RAID 2 to 5. Therefore one of ordinary skill in the art at the time the invention was made would have known that since the other embodiments are appropriate for RAID 2 to 5 then this embodiment of copying the data from the first disk to the second disk would be

appropriate for RAID level 1. In addition the first embodiment of Shirasawa et al. could also be used for RAID levels 2 to 5 as it would provide addition protection against lose of data (i.e. the entire contents of the first storage device would be available and online after it was copied over to the second storage device). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the teachings of Shirasawa et al. in a RAID system for the reasons stated above.

- B) As to claims 2-8, 10, 11, and 13-19, these limitations are fully taught by Shirasawa et al. (see Fig 3, ¶ 14-21 and 38-41).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L. Ellis whose telephone number is 571-272-4205. The examiner can normally be reached on weekdays from 6:00AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Kevin L. Ellis  
Primary Examiner  
September 27, 2005

A handwritten signature in black ink, appearing to read "Kevin L. Ellis". The signature is written in a cursive, flowing style.